

CEDARO report: Behavioural and clinical predictors for Loiasis

Background

The “CERMEL Data Repository” (CEDARO) aims to archive data of all research projects performed at CERMEL. A detailed description of the repository is available from the CEDARO team (cedaro@cermel.org). Before archiving, a codebook and an anonymized dataset are generated. In addition, a basic statistical analysis is performed to ensure that the data in the publication corresponds to the submitted dataset. Typically, only data to ensure that the numbers of the basic characteristics of the study population and of the outcomes are correct. Rarely would effect sizes, regression models etc. be verified. A report comparing the original published results with that of the CEDARO analysis is generated and sent to the investigator who submitted the data set. The CEDARO team will follow-up on any discrepancies to make sure that the analysis and data are valid.

Publication

Reference

Mischlinger J, Veletzky L, Tazemda-Kuitsouc GB, Pitzinger P, Matsegu PB, Gmeiner M, Lagler H, Gebru T, Held J, Mordmüller B, Ramharter M. Behavioural and clinical predictors for Loiasis. *J Glob Health*. 2018 Jun;8(1):010413.

DOI: 10.7189/jogh.08.010413

PubMed PMID : 29497506

PubMed-Central PMCID: PMC5827628

Abstract

“Loiasis is a vector-borne disease in Central and West Africa. While there is still uncertainty to what extent loiasis is responsible for population morbidity, individuals having both loiasis and onchocerciasis have a high risk of fatal encephalopathy when treatment (ie, ivermectin) for onchocerciasis is given. Therefore it is current policy that communities of high loiasis-burden are excluded from mass drug administration programmes of ivermectin. To address this treatment gap we present diagnostic scores, based on clinical and behavioural predictors that may help to rapidly identify sub-groups with loiasis within high-burden communities.”

Analyse

“In total 947 participants were recruited with a median age of 22 years (interquartile range (IQR) 8-51) and a male/female ratio of 0.84. 289 out of 947 (30.5%) had loiasis according to our case definition and positivity for RAPLOA was the most frequent loiasis-defining characteristic (65.1%; 188/289) (Table 2). Prevalence of pruritus was 32.3% (306/947) in the overall study population and 67.2% (636/947) reported being regularly engaged in activities that involved exposure to the forest at least twice weekly. The sub-study assessing Calabar swelling recruited 213 participants (median age 16; IQR 7 - 40, male/female ratio of 0.90). 60/213 (28.2%) had loiasis.”

Table 1: Section 1 Results

Variables	CEDARO
Participant	947
Median age (range)	22 (8 - 51)
Loiasis (Yes)	289 (30.5%)
RAPLOA +	188 (65.1%)
Prevalence of pruritus	306 (32.3%)
Exposure to forest	636 (67.2%)
Calabar swelling recruited	213
Calabar swelling with loiasis	60 (28.2%)

Table 2: Section 1 results

Characteristics	Total cohort (N = 947)	Loiasis (N = 289)	Population of Calabar swelling sub-study (N = 213)
	No.(column %)	No.(row %)	No.(column %)
Age(years)			
Median (IQR)	22 (8 - 51)	51 (32 - 65)	16 (7 - 40)
below 6	160 (16.9%)	2 (0.7%)	44 (20.7%)
6-17	272 (28.7%)	26 (9%)	65 (30.5%)
18-34	147 (15.5%)	52 (18%)	37 (17.4%)
35-49	120 (12.7%)	60 (20.8%)	27 (12.7%)
50-64	113 (11.9%)	65 (22.5%)	13 (6.1%)
65+	135 (14.3%)	84 (29.1%)	27 (12.7%)
Sex			
Male	434 (45.8%)	124 (42.9%)	101 (47.4%)
Exposure to forest			
None	311 (32.8%)	12 (4.2%)	67 (31.5%)
Occasional	237 (25%)	42 (14.5%)	76 (35.7%)
Frequent	173 (18.3%)	82 (28.4%)	42 (19.7%)
Intensive	226 (23.9%)	153 (52.9%)	28 (13.1%)
RAPLO			
Positive	245 (25.9%)	245 (100%)	46 (21.6%)
Microfilareamia			
Positive	101 (10.7%)	101 (100%)	24 (11.3%)
RAPLO or microfilareamia			
Positive	289 (30.5%)	289 (100%)	60 (28.2%)
Pruritus			
Positive	306 (32.3%)	206 (71.3%)	42 (19.7%)

- CEDARO ID: NA
- Date of report: 2019-10-21
- Analysis performed by: Eddy MBENA
- Analysis supervised by: Fabrice Mougeni & Bertrand Lell
- Raw data supplied by: Frieder Schaumburg
- Code repository: <https://gitlab.com/MBENA/loiasis>
- Local storage path: NAS